

EPA Superfund Explanation of Significant Differences:

**NORTH BELMONT PCE
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EXPLANATION OF SIGNIFICANT DIFFERENCES TO THE REMEDIAL ACTION

NORTH BELMONT PCE SITE
BELMONT, GASTON COUNTY, NORTH CAROLINA



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1.0 INTRODUCTION

This Explanation of Significant Differences (ESD) was prepared for the North Belmont PCE Site ("Site"). The purpose of this ESD is to document that the Environmental Protection Agency (EPA or the Agency) is modifying the original remedy requirements in the Record of Decision (ROD) for the Site.

EPA previously issued the North Belmont ROD on September 24, 1997. The original requirements and goals of the September 1997 ROD are reiterated in Section 4 below. The necessity of this ESD is based on information generated during the development of the Site's Remedial Design (RD). The new information is summarized in Section 6 below. The modification is: Delete the requirement for in-situ bioremediation.

This ESD is issued pursuant to Section 117(c) of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), 42 U.S.C Section 9617(c), and the National Oil and Hazardous Substances Pollution Contingency Plan (NCP), 40 CFR Section 300.435(c)(2)(I). A copy of this ESD will be added to the Site Administrative Record and to the Information Repository, both of which can be found in the Gaston County Public Library or in EPA's Region 4 Records Center. The public is encouraged to review both the Administrative Record and the Information Repository during normal working hours.

2.0 SITE LOCATION AND DESCRIPTION

The North Belmont PCE Site consists of two closed dry cleaning operations located in North Belmont, Gaston County, North Carolina (latitude 35°16'24.5" and longitude 81°03'04.5"). These two areas are referred to as "Source Area A" and "Source Area B" (**Figure 1**).

Source Area A is located at Roper's Shopping Center in Land Lot 5, Parcel 15-18A on Woodlawn Avenue. The former dry cleaner facility is approximately 0.75 acres in size and is bounded to the east and west by residential neighborhoods; to the north by a cemetery and an undeveloped wooded tract; and to the south by North Belmont Elementary School. Two mobile homes are located on the property in the back of the shopping center, each occupied by one tenant.

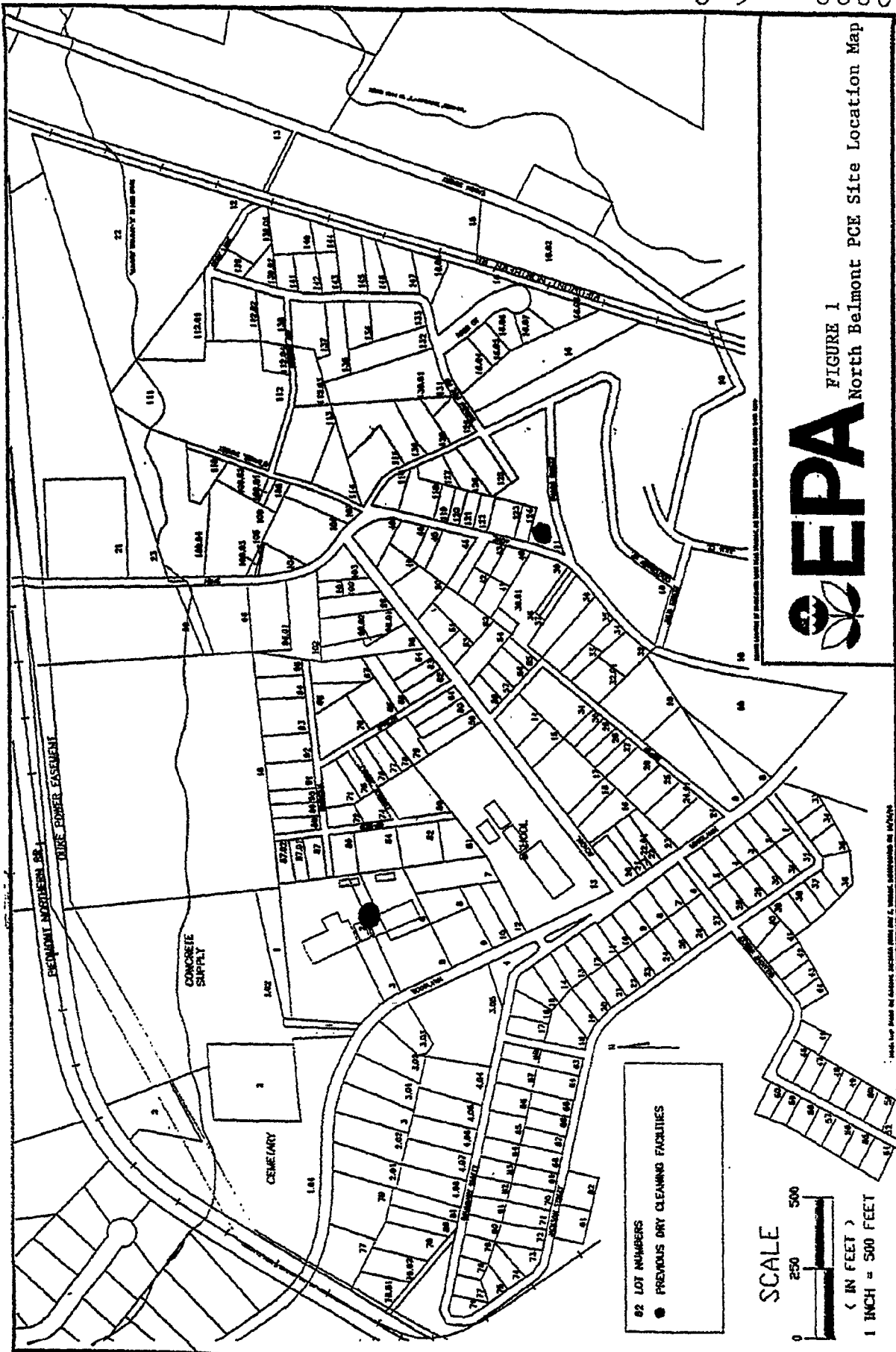


FIGURE 1

North Belmont PCE Site Location Map

Scale bar based on aerial photograph, not to scale. All distances are approximate.

Source Area B is located at the northeastern corner of Acme Road and Suggs Road in Land Lot 11, Parcel 15-18. This parcel has been converted to residential property. The majority of the area surrounding Source Area B is residential with a few small businesses. A cabinet shop is located to the north.

3.0 SITE HISTORY

Source Area A was operated by the Untz family from 1960 to 1975 as a dry cleaning establishment. A boiler located behind the building was used to "distill" the waste dry cleaning solvents. The spent solvent residue from the boiler distillation unit was reportedly disposed onto the ground surface behind the building, and spent solvents were disposed through the on-site septic tank system. Source Area B was also operated by the Untz family prior to moving the dry cleaning establishment to Roper's Shopping Center. Source Area B was discovered during the site reconnaissance in October 1995 from an interview with a local resident.

In February 1991, the Gaston County Health Department sampled the well that provided water to the North Belmont Elementary School and two single family dwellings. This sampling was associated with an effort by the County to evaluate community water supplies for volatile organic compounds (VOCs) contamination. The results of this sampling indicated significant VOC contamination in the well.

EPA Region 4 Emergency Response was notified. EPA and the Gaston County Health Department sampled 25 drinking water wells. Tetrachloroethene (PCE), trichloroethene (TCE) and cis-1,2-dichloroethene (1,2-DCE) were detected in sixteen samples. PCE concentrations were found as high as 15,000 parts per billion (ppb). The elementary school was immediately connected to the City of Belmont water system. Twenty-nine of the neighborhood drinking water wells were taken out of service and connected to the Belmont City water service. All but 12 of the residential wells were subsequently abandoned by grouting them to the surface; 12 wells remained intact and were proposed as monitoring wells. Seven residences in the neighborhood were informed of the contamination but chose to continue to use their wells and not connect to city water.

4.0 RECORD OF DECISION

The ROD was signed on September 24, 1997, and addresses groundwater contamination at the Site. The major components of the selected remedy, as depicted in the 1997 ROD:

- < Installation of an in-well vapor stripping system to treat contaminated groundwater that is above Maximum Contaminant Levels or the North Carolina Groundwater Standards, whichever are more protective for each particular contaminant;
- < In-situ bioremediation;
- < Connection of affected residences, businesses, churches, etc currently not on city water to the City of Belmont or Gaston County public water supply;
- < Optional wellhead treatment for affected private wells; and
- < Continued analytical monitoring for contaminants in groundwater.

5.0 STATUS OF REMEDIAL DESIGN AND REMEDIAL ACTION

The RD for groundwater was initiated on September 30, 1997, and completed in July 2000. The remedial action is scheduled to begin in the fall of 2000.

6.0 RATIONALE FOR ESD

There are three types of post-ROD changes. Depending on the extent or scope of the modification being considered, the post-ROD change is either (1) non-significant or minor; (2) significant; or (3) fundamental. A different documentation procedure is associated with each type. For non-significant or minor changes, these changes are documented by recording the change in the post-decision document file. The dissemination of a fact sheet to the public is optional. For significant changes to a ROD or RA, these changes should be documented in an ESD, as required by CERCLA and the NCP. Notice is sent to the public for their information. Fundamental changes to the remedy should be documented in a ROD amendment with public comments.

EPA has determined that the changes and additions covered by this ESD constitute a significant change to the original scope of the remedy selected in the ROD. Therefore, an ESD is appropriate to document these changes.

In the 1997 ROD, EPA proposed to remediate the groundwater by in-situ bioremediation and in-well vapor stripping. Through this document, EPA is setting forth a change in the decision regarding groundwater treatment.

During the remedial design, a treatability was conducted to determine if in-situ bioremediation was feasible at this Site. A laboratory microcosm treatability study was conducted under controlled conditions to identify site-specific factors affecting the rate and extent of reductive dechlorination of contaminants at the Site. The 421-day microcosm study found little enhancement of tetrachloroethene (PCE) reductive dechlorination. The presence of daughter products (e.g., TCE, cis1,2-dichloroethene (DCE), vinyl chloride (VC), and ethene) was found to be insignificant. The conclusion of the study was that complete dechlorination of PCE would not occur at the Site and therefore, full-scale implementation of in-situ bioremediation would perform poorly in the field and was not recommended.

7.0 STATUTORY DETERMINATIONS

EPA has considered the new information that has been developed and the modifications made to the selected remedy by this ESD and believes that the remedy selected in the ROD remains protective of human health and the environment, complies with Federal and State requirements that are applicable or relevant and appropriate to this remedial action, and is cost-effective. In addition, the remedy utilizes permanent solutions and alternative treatment technologies to the maximum extent practicable at this Site.

8.0 PUBLIC NOTIFICATION

In accordance with Section 117(c) of CERCLA, EPA published a notice of the ESD in the local newspapers, which describes the ESD and its availability for review. An ESD Fact Sheet was also prepared and mailed out to the persons on the Site mailing list.


Richard D. Green, Director
Waste Management Division

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Date